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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/892,654	06/28/2001	Marcos de Albuquerque Contrucci	08144.0004	2029

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EXAMINER
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ANDREWS, MELVYN J

ART UNIT	PAPER NUMBER
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1742

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DATE MAILED: 05/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/892,654

Applicant(s)

CONTRUCCI ET AL.

Examiner

Melvyn J. Andrews

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,7-15 and 17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,7-15 and 17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 7 to 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Legille et al (US 4,243,351) in view of Fukushima et al (US 4,913,406), Contrucci et al (US 6,391,086) and Wieczorek (US 3,799,368). Legille et al discloses a method and apparatus for charging a shaft furnace such as a blast furnace (col.1, lines 14 to 13) with a rectangular cross-section with a chute 34 (col.8, line 18 to col.9, line16) which is equivalent to the claimed means for distributing the charge but does not explicitly disclose that the charge is metal oxide and solid fuel as in Claims 1 and 7 to 12, that the charge may be agglomerates as in Claims 13 to 15 and does not explicitly disclose distributing the charge in a specific pattern as in Claim 17 but Fukushima et al discloses a method of operating a shaft furnace by charging different ore/coke ratio mixture in a specific pattern (col.2, lines 20 to 58) and Contrucci et al discloses self-reducing agglomerates comprising iron oxide, a reductant and a fluxing agent (col.3, lines 26 to 29 ) it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a charge of ore /coke in the Legille et al method as disclosed by Fukushima et al and to supply the ore /coke charge in a pattern as disclosed by Fukushima et al because both methods produce iron and it would have been obvious modify the Legille et al method by supplying the ore/coke charge in a pattern as taught by Fukushima et al in order to obtain better permeability of the

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heating gas; also it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide agglomerates as the charge in the Legille et al method because agglomerates such as disclosed by Contrucci et al are rich in iron content suitable for the production of iron. With respect to Claim 8 Wieczorek discloses a loading system more than one distributor (col.5, line 20 to col.8, line 33) it would have been obvious to one of ordinary skill in the art at the time the invention was made to pluralize the Legille et al charging apparatus as taught by Wieczorek in order to allow an unceasing loading of the minerals and coke into a blast furnace without any alteration in the counter-pressure in the blast furnace.

### ***Response to Arguments***

Applicant's arguments filed February 24, 2003 have been fully considered but they are not persuasive. Applicants' argument that the Legille et al apparatus comprising an elongated charge distribution chute is not suitable to form a longitudinal central portion of solid fuel surrounded by a longitudinal portion of a metal oxide is not persuasive. The Leguille et al apparatus is capable of charging the furnace in different patterns (col.8, line 18 to col.9, line 16) which may be used to achieve specific patterns as shown by Fukushima et al (col.2, lines 20 to 58) and as shown by Wieczorek which discloses a clear distinction of the separation line between inner and outer loads (col.5, lines 3 to 37) since blast furnaces are being charged in all cases.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 7 to 15 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 7 to 15 and 17 are indefinite because the “means for conveying” and “means for distributing” are not clearly defined in the specification or shown in the drawings. Applicants response has been noted but the listed elements 1, 2, and 4 do not completely define or show “means for conveying” and elements 7 and 6 do not completely define or show “means for distributing”.

Claims 7 to 11 are indefinite because the structural relationships of the listed elements are not set forth.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melvyn J. Andrews whose telephone number is 703-308-3739. The examiner can normally be reached on 8:00A.M. to 4:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy V King can be reached on 703-308-1146. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.

  
**MELVYN ANDREWS**  
**PRIMARY EXAMINER**

mja  
May 15, 2003